

Which rotation to use?

- Perform this check after every insertion, before doing a rotation (only-once)
- First check the deepest unbalanced node that has 2/-2 balance
- If the unbalanced node's height is:
 - **Positive**: Left side (e.g., height difference=2)
 - If the left node's height is:
 - Positive: Left rotation (e.g., height difference=1)
 - Negative: Left-right rotation (e.g., height difference=-1)
 - **Negative**: Right side (e.g., height difference=-2)
 - If the right node's height is:
 - Positive: Right-left rotation (e.g., height difference=1)
 - Negative: Right rotation (e.g., height difference=-1)